Foods Allowed.

Clear meat soups.

All meats except liver.

Eggs in any form.

All fish except oysters, clams or scallops.

As desserts, jellies, or custards, or ice-cream, made with cream and eggs, and sweetened with saccharine, and flavored with vanilla, coffee, or brandy.

Cream, cheese, and the following vegetables: Asparagus, beet greens, Brussells sprouts, cabbage, cauliflower, celery, chicory, cresses, cucumbers, egg plant, endive, lettuce, mushrooms, radishes, rhubarb, salsify, spinach, stringbeans, tomatoes, vegetable marrow.

TABLE IV.—Table of Equivalents.

Article.	Per cent. carbohydrates.	Amount in ounces equal to 1 ounce white bread.
Breads:		
White	51–55	1
All other	47–53	1
Rolls and biscuit	52–60	1
Cornbread	46	1⅛
Crackers, average	69–72	¾
Cereals:		
Oatmeal, boiled	11.3	5
Hominy, boiled	17.8	3
Macaroni, boiled	15.8	3¼
Rice, boiled	24.4	2⅛
Tubers and Legumes:		
Potatoes, cooked	18–20	3
Parsnips	13	4
Beans, baked	20	2¾
Beans, lima, cooked	20	2¾
Peas, green, cooked	15	3½
Milk	4–5	10
Fruits:		
Apples, apricots, and pears	12–14	4
Cherries	15	3½
Huckleberries	16	3¼
Plums	20	2½
Bananas	22	2½
Nuts:		
Filberts	12	4½
Almonds	15	3½
Peanuts	22	2½

TABLE V.—For Mild Cases.

List of vegetables and fruits with less than 12 per cent. carbohydrates: 3 ounces of any one of these may be taken daily.

Vegetables 5 to 10 per cent.:

Onions, squash, turnips, okra, carrots.

Fruits below 12 per cent.:

Lemons, watermelons, strawberries, gooseberries, muskmelons, cranberries, blackberries, currants, grapefruit, oranges, raspberries, sour apples.

Nuts:

Butternuts, hickorynuts, walnuts.

TABLE VI.—Green Days.

Breakfast:
  1 egg, boiled or poached.
  Cup of black coffee.

Dinner:
  Spinach with a hard-boiled egg.
  ½ ounce bacon.
  Salad, with ½ ounce oil.
  6 ounces of wine or 1 ounce of whisky or brandy.

4.30 P.M.:
  Cup of beef tea or chicken broth.

Supper:
  1 egg, scrambled, with tomato and a little butter.
  ½ ounce bacon.
  Cabbage, sauerkraut, string-beans, or asparagus.
  Cup of tea.

½ ounce of sodium bicarbonate in the twenty-four hours.

CARDIAC DANGERS IN HIGH ALTITUDES.

By J. N. Hall, M.D.,

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The dangers to the heart in high altitudes are, I believe, precisely the same as elsewhere, but very sharply exaggerated in certain directions. The most frequent and serious of these troubles are found in connection with myocarditis, arteriosclerosis, and dilatation of the heart.

Leaving the physiology involved aside for the present, we may fairly assume that the heart and lungs have to meet increased demands with each added degree of elevation and its consequent decrease in atmospheric pressure. Common experience will teach one this, even though he knows nothing of physics. To meet the increased circulatory demand the heart must hypertrophy if one is to take his usual exercise.

The robust miners who work at 10,000 or 12,000 feet elevation have a cardiac area extending to the nipple line, in spite of their more voluminous lungs, for increased lung capacity is equally necessary in their work. It is found that the Virginia deer has less heart weight in proportion to body weight than our own blacktail deer, yet the latter, when fat in the fall, can hardly run a half mile, when high in the mountains, without becoming almost exhausted, as I can testify from personal knowledge.

It is not strange, then, that we see frequently cases of acute dilatation after comparatively slight effort in those whose arteries have begun to harden, and who have been accustomed for perhaps fifty years to a sea-level pressure. There are at least three contributory factors to be noted: those coming to the mountains are frequently professional men and others equally "out of training," who still wish to climb a mountain on the day of their arrival; the bracing air gives them a sensation of increased physical and mental vigor, so that they feel like undertaking a big feat, and are led into undertaking too much of a feat; and I have known repeatedly of trouble indirectly from climatic conditions, which, being new and strange, were the cause of overexposure or overexertion.

Thus I have seen recently a man, aged sixty-seven years, who walked three miles on a fine day and failed to meet his friend, with whom he expected to ride back; a heavy head wind meanwhile arose and in trying to walk against it, his heart gave out, he fell to the ground, became chilled, contracted pneumonia, and now lies at the point of death. Many a patient walks in the foothills or mountains until beginning fatigue warns him to return. Before reaching home he is utterly exhausted; and the physician finds him with a widely dilated heart and a mitral leakage.

One patient had been a hunter and trapper in the Rocky Mountains until fifty years of age, when he purchased a ranch in the Arkansas Valley at an elevation of only 3000 to 4000 feet. Seven years later some friends visited him from the East and he took them up Long's Peak, over 14,000 feet in altitude. He suffered greatly from palpitation and dyspnœa, but his grit being better than his judgment he continued until he dropped from exhaustion. When he started he was a hale looking ranchman of fifty-seven years, with no suggestion of heart disease; when I saw him a few days later with Dr. Spivak his heart was greatly dilated, the mitral valve leaked, and there was general dropsy. Death resulted in a few days. The death of Dr. Nicholas Senn is stated in the medical press to have resulted from just such overstrain in the high altitudes of the mountains of La Paz, in South America.

The unseasonable and unexpected fall of snow has, in a similar manner, in some of my patients, occasionally demanded more effort than was anticipated, in getting back to camp or hotel, with resulting overstrain of the heart. Any of these troubles might have developed elsewhere, but the means for rapidly exhausting the strength of an ill-nourished heart muscle seem to be less easily attainable at sea level than here.

In those with but a narrow margin of heart strength the increased work of heart and lungs, as they ascend in a railway train, may bring trouble. A Pullman conductor who had run for many years over the highest point of the Union Pacific Railway, told me that he had had eight deaths occur in travellers upon his cars as they neared the high point of the route. Presumably most of these were from causes allied to those I am discussing. Several such have fallen under my notice.

I have the impression that attacks of angina pectoris in those disposed to the disease, are more easily provoked here than in the East. This may be because I have known of two or three patients who had the attacks upon very slight exertion or excitement; but my experience with this disease elsewhere is so limited that I hesitate to more than mention this belief.

Without statistics to prove it I am equally impressed with the belief that atheromatous patients with increased blood pressure are more liable to disaster than those without such increase. The failure by even a small margin to maintain the required pressure disturbs the circulatory conditions profoundly.

I have just sent East a woman, aged forty-three years, who presented premature senility and marked arteriosclerosis, with an increase of 50 per cent. in her blood pressure. She complained within a few days of arrival that a walk of a mile had exhausted her so that she barely reached her hotel, and especially that her legs were so tired as to be painful, though they recovered after a short rest. She had never had such symptoms before. Her heart was dilated, the mitral valve leaked, and the feet were cold. No arterial pulsation could be found in either foot. The intermittent lameness here had as its base the usual arteriosclerosis, but the exhaustion of a feeble heart muscle, insufficiently supplied with blood, and called upon for increased work because of the unaccustomed altitude brought the trouble to an immediate crisis. I do not doubt that her blood pressure was still higher before her overexertion here, and its fall with the acute dilatation of the heart would account for the sudden development of the symptoms.

Patients with extreme mitral stenosis, whose hearts are suddenly called upon for greatly increased work, are in grave danger anywhere, but especially so here. I have seen three deaths in young patients within the first seventy-two hours in acute pneumonia under these conditions: in one within thirty hours from the initial chill; a fourth escaped by the narrowest margin, the pneumonia aborting at the end of forty-eight hours after Dr. Rover and I believed that death was imminent.

Very moderate exertion in young man whose mitral orifice was extremely narrowed, as we learned at the postmortem examination, brought on pulmonary œdema, with expectoration of enormous quantities of pink serum, and death in three hours. A similar case with presystolic murmur and thrill, seen with Dr. H. B. Whitney, was saved by prompt and copious venesection.

Patients with hearts greatly exhausted by chronic disease, as in phthisis, pernicious anemia and similar troubles, are occasionally seriously embarrassed by the increased demands of the altitude, even though no physical exertion be made. I have seen cases of advanced tuberculosis in which, upon arrival here, this heart weakness, together with the greatly diminished lung area, caused acute suffering, demanding immediate return to a more favorable elevation. This may be advised the more readily because no possible climatic advantages can be of any service to such patients. The atrophic heart of wasting disease, the decreased lung area, the anemia, the general weakness, the exertion of coughing, and the mental anxiety, are all doubtless contributory factors.

In fairly compensated valvular lesions I have seen death follow a sudden break in the compensation from a single severe overexertion. The same factors which operate upon the arteriosclerotic heart are active also in these cases, as well as the greater demands which given work makes upon this organ, the liability to overexertion because of the stimulating climate, etc. A typical example is that of a boy, aged eighteen years, with well-compensated aortic regurgitation following rheumatism. He was quite an athlete in the early days of wheel riding, and rode one day with this club to a point twenty miles away in the foothills. This he did quite easily, but it evidently was all that he should have done that day. On returning in the afternoon he found that a stiff head wind had arisen, and with all the exertion he could make he was not able to keep up with his companions. He went to bed on reaching Denver, and presented, when I examined him, a greatly dilated heart, mitral regurgitation, general anasarca, albuminuria, and all the signs of imminent death from acute cardiac failure. His death was reported to me by his physician a few days later.

A long experience here convinces me, however, that the average case of well-compensated valvular disease does as well here as anywhere else. The relative infrequency of acute rheumatism as compared with some harsher climates, is advantageous. Those acclimated and well accustomed to the seasonal and topographical peculiarities of a mountainous region, are not so likely to fall into the errors I have noted as newcomers would be.

Patients with valvular disease, but with well-nourished heart muscle and fair arteries, may, almost regardless of age, I believe, go to reasonably high altitudes with safety, if only they follow the rule I have long laid down for my cardiac patients, namely, to make no exertion which causes any considerable dyspnœa. After any failure of compensation occurs it is better to avoid the increased demands involved.

THROMBOSIS OF THE INFERIOR VENA CAVA.

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THE value of reports of unusual cases lies, first, in the clinical interest and attention aroused by anything out of the ordinary, and, second, in the educational value of this attention if it is pursued to a logical conclusion. A report of two cases of thrombosis of the inferior vena cava, therefore, should prove of some interest, particularly if it includes a study of the manifold clinical manifestations of the condition. This communication concerns two such cases, Case I being acute and possibly a sequel of influenza, and Case II being chronic, the diagnosis being made possible by the collateral circulation.

CASE I.—A man, aged twenty-six years, single, a clothing salesman by occupation. His personal history is uneventful, with the exception of typhoid fever four years previously, from which he made a good recovery. He has noticed a gradual gain in weight the past few months. Two weeks before the onset of the present illness the patient was confined to his bed a few days with influenza, but after three or four days he was able to be about and returned to work. He felt well for a week, but at the end of this time, while lifting a heavy case of dry goods, he was seized with a severe pain in the right side. On examination his physician found his abdomen tender, with some ascites, and diagnosticated probable cirrhosis of the liver.

When seen by E. R. S., five days later, the man seemed desperately ill; his face was drawn, anxious, and very pale, but he was able to talk intelligently with a very weak voice. On examination he appeared to be rather well-built and muscular. His heart and lungs were negative. There was no fever. The abdomen was enormously distended, tense, symmetrical, and tympanitic on percussion, with slight tenderness. The liver and splenic dulness were not demonstrable. No fluid in the abdominal cavity could be discovered on account of the tympanites. The legs and external genitalia were much swollen, œdematous, and cyanosed, but not tender or painful, except for the tenseness and tightness due to the œdema. The history of the swelling was that it had come on gradually since the onset of his illness. Rectal examination was negative. The bowels moved regularly. The urine on examination was free from albumin, and in other respects negative.

The appearance of the abdomen suggested an intestinal obstruc-